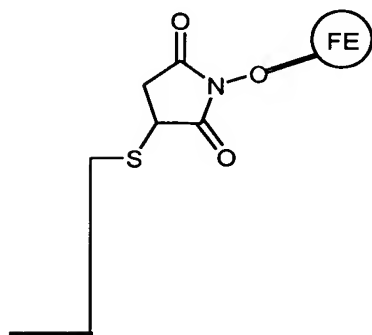


Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

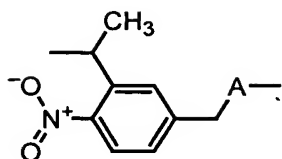
1. (Original) A building block of the general formula



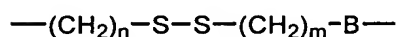
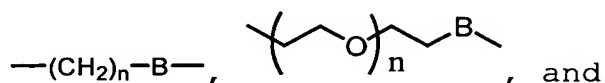
capable of transferring a functional entity (FE) to a recipient reactive group, wherein

the lower horizontal line is a **Complementing Element** identifying the functional entity and the vertical line between the complementing element and the S atom is a **Spacer**.

2. (Original) The building block of claim 1, wherein the spacer is a valence bond, C₁-C₆ alkylene-A-, C₁-C₆ alkenylene-A-, C₂-C₆ alkynylene-A-, or

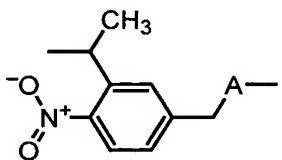


said spacer optionally being connected through A to a moiety selected from

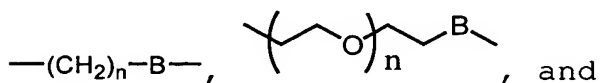


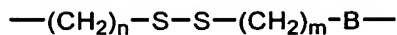
where A is a valence bond, $-C(O)NR^1-$, $-NR^1-$, $-O-$, $-S-$, or $-C(O)-O-$; B is a valence bond, $-O-$, $-S-$, $-NR^1-$ or $-C(O)NR^1-$ and connects to the S atom of the carrier; R^1 is selected independently from H, C_1-C_6 alkyl, C_3-C_7 cycloalkyl, C_1-C_6 alkylene-aryl, or aryl substituted with 0-5 halogen atoms selected from -F, -Cl, -Br and -I; and n and m independently are integers ranging from 1 to 10.

3. (Original) The compound according to claim 1, wherein the **Spacer** is C_1-C_6 alkylene-A-, C_1-C_6 alkenylene-A-, C_2-C_6 alkynylene-A-, or



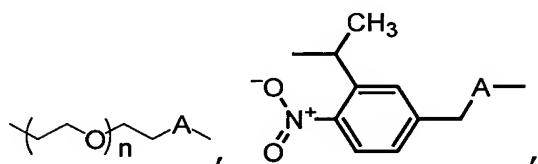
said spacer optionally being connected through A to a moiety selected from



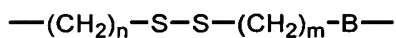


where A is $-C(O)NR^1-$, or $-S-$; B is $-S-$, $-NR^1-$ or $-C(O)NR^1-$ and connects to S-C-connecting group; R^1 is selected independently from H, C_1-C_6 alkyl, C_1-C_6 alkylene-aryl, or aryl; and n and m independently are integers ranging from 1 to 6.

4. (Original) The compound according to claim 1, wherein **Spacer** is $-A-$, a group C_1-C_6 alkylene- $A-$, C_2-C_6 alkenylene- $A-$, or C_2-C_6 alkynylene- $A-$ optionally substituted with 1 to 3 hydroxy groups, or



said spacer being connected through A to a linker selected from

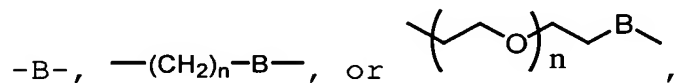


where A is a valence bond, $-NR^2-$, $-C(O)NR^2-$, $-NR^2-C(O)-$, $-O-$, $-S-$, $-C(O)-O-$ or $-OP(=O)(O^-)-O-$; B is a valence bond, $-O-$, $-S-$, $-NR^2-$, $-C(O)-$ or $-C(O)NR^2-$ and connects to S-C-connecting group; R^2 is selected independently from H, C_1-C_6 alkyl, C_3-C_7

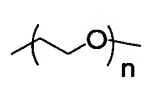
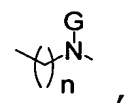
cycloalkyl, aryl, C_1-C_6 alkylene-aryl, $(CH_2CH_2O)_n$ or $(CH_2CH_2N^G)_n$; G is

H or C₁-C₆ alkyl; and n and m independently are integers ranging from 1 to 10.

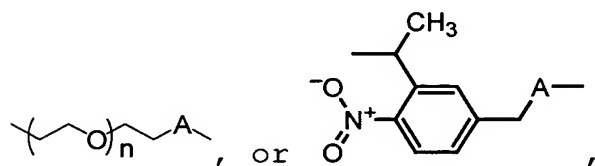
5. (Original) A compound according to claim 4, wherein the **spacer** is C₂-C₆ alkenylene-A, said spacer being connected through A to a moiety selected from



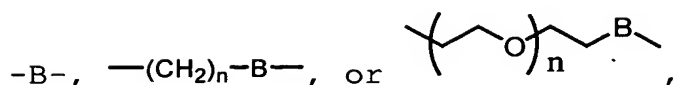
where A is a valence bond, -C(O)NR²-, -NR²-C(O)-, -S-, -C(O)-O- or -OP(=O)(O⁻)-O-; B is a valence bond, -S-, -NR²-, or -C(O)- and connects to S-C-connecting group; n and m independently are integers ranging from 1 to 10 and

R² is selected independently from H,  or , wherein G is H or C₁-C₆ alkyl; and the spacer is connected to the complementing element through a nucleobase.

6. (Original) A compound according to claim 4, wherein the **spacer** is -A-,

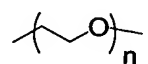



said spacer being connected through A to a moiety selected from



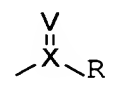
where A is a valence bond, $-\text{NR}^2\text{-C(O)-}$, $-\text{O-}$, or $-\text{S-}$; B is a valence bond, $-\text{S-}$, $-\text{NR}^2\text{-}$, or $-\text{C(O)-}$ and connects to S-C-connecting group;

n and m independently are integers ranging from 1 to 10 and

R^2 is selected independently from H,  or , wherein G is H or $\text{C}_1\text{-C}_6$ alkyl; and the spacer is connected to the complementing element via a phosphorus group.

7. (Original) A compound according to claim 6, wherein the phosphorus group is a phosphate or thiophosphate group attached to a 3' or 5' end of a complementing element.

8. (Currently Amended) The building block according to ~~any of~~

~~the claims 1 to 7~~ claim 1, wherein **FE** is  where

X = $-\text{C-}$, $-\text{S-}$, $-\text{P-}$, $-\text{S(O)-}$, or $-\text{P(O)-}$,

V = O, S, NH, or N- $\text{C}_1\text{-C}_6$ alkyl, and

R is H or selected among the group consisting of a $\text{C}_1\text{-C}_6$ alkyl, $\text{C}_2\text{-C}_6$ alkenyl, $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_4\text{-C}_8$ alkadienyl, $\text{C}_3\text{-C}_7$ cycloalkyl, $\text{C}_3\text{-C}_7$ cycloheteroalkyl, aryl, and heteroaryl, said group being substituted with 0-3 R^4 , 0-3 R^5 and 0-3 R^9 or $\text{C}_1\text{-C}_3$ alkylene- NR^4_2 , $\text{C}_1\text{-C}_3$ alkylene- $\text{NR}^4\text{C(O)R}^8$, $\text{C}_1\text{-C}_3$

alkylene-NR⁴C(O)OR⁸, C₁-C₂ alkylene-O-NR⁴₂, C₁-C₂
alkylene-O-NR⁴C(O)R⁸, C₁-C₂ alkylene-O-NR⁴C(O)OR⁸ substituted
with 0-3 R⁹[[.]]₂

where R⁴ is H or selected independently among the
group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl,
C₃-C₇ cycloalkyl, C₃-C₇ cycloheteroalkyl, aryl, heteroaryl, said
group being substituted with 0-3 R⁹ and

R⁵ is selected independently from -N₃, -CNO,
-C(NOH)NH₂, -NHOH, -NHNHR⁶, -C(O)R⁶, -SnR⁶₃, -B(OR⁶)₂,
-P(O)(OR⁶)₂ or the group consisting of C₂-C₆ alkenyl, C₂-C₆
alkynyl, C₄-C₈ alkadienyl said group being substituted with 0-2
R⁷,

where R⁶ is selected independently from H, C₁-C₆
alkyl, C₃-C₇ cycloalkyl, aryl or C₁-C₆ alkylene-aryl substituted
with 0-5 halogen atoms selected from -F, -Cl, -Br, and -I; and
R⁷ is independently selected from -NO₂, -COOR⁶, -COR⁶, -CN,
-OSiR⁶₃, -OR⁶ and -NR⁶₂[[.]]₂

R⁸ is H, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₃-C₇
cycloalkyl, aryl or C₁-C₆ alkylene-aryl substituted with 0-3
substituents independently selected from -F, -Cl, -NO₂, -R³,
-OR³, -SiR³₃

R⁹ is =O, -F, -Cl, -Br, -I, -CN, -NO₂, -OR⁶, -NR⁶₂, -NR⁶-C(O)R⁸,
-NR⁶-C(O)OR⁸, -SR⁶, -S(O)R⁶, -S(O)₂R⁶, -COOR⁶, -C(O)NR⁶₂ and
-S(O)₂NR⁶₂.

9. (Original) A compound according to claim 8, wherein R is H or selected among the group consisting of a C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₄-C₈ alkadienyl, C₃-C₇ cycloalkyl, C₃-C₇ cycloheteroalkyl, aryl, and heteroaryl, said group being substituted with 0-3 R⁵ and 0-3 R⁹, or selected among the group consisting of C₁-C₃ alkylene-NR⁴₂, C₁-C₃ alkylene-NR⁴C(O)R⁸, C₁-C₃ alkylene-NR⁴C(O)OR⁸, C₁-C₂ alkylene-O-NR⁴₂, C₁-C₂ alkylene-O-NR⁴C(O)R⁸, and C₁-C₂ alkylene-O-NR⁴C(O)OR⁸ substituted with 0-3 R⁹.

10. (Currently Amended) A compound according to ~~claims 8 or 9~~ claim 8, wherein R is H or selected among the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, C₄-C₈ alkadienyl, C₃-C₇ cycloalkyl, C₃-C₇ cycloheteroalkyl, aryl, and heteroaryl, said group being substituted with 0-3 R⁵ and 0-3 R⁹.

11. (Currently Amended) A compound according to ~~any of the claims 8 to 10~~ claim 8, wherein R is selected among the group consisting of C₁-C₃ alkylene-NR⁴₂, C₁-C₃ alkylene-NR⁴C(O)R⁸, C₁-C₃ alkylene-NR⁴C(O)OR⁸, C₁-C₂ alkylene-O-NR⁴₂, C₁-C₂ alkylene-O-NR⁴C(O)R⁸, and C₁-C₂ alkylene-O-NR⁴C(O)OR⁸ substituted with 0-3 R⁹.

12. (Currently Amended) A compound according to ~~any of the claims 1 to 11~~ claim 1, wherein X = C and V = O or S.

13. (Currently Amended) A compound according to ~~claims 1 to 12~~ claim 1, wherein X = C and V = O.

14. (Currently Amended) A compound according to ~~claims 1 to 13~~ claim 1, wherein complementing element is a nucleic acid.

15. (Currently Amended) A compound according to ~~claims 1 to 14~~ claim 1, wherein Complementing element is a sequence of nucleotides selected from the group of DNA, RNA, LNA PNA, or morpholino derivatives.

16. (Currently Amended) A library of compounds according to ~~any of the claims 1 to 15~~ claim 1, wherein each different member of the library comprises a complementing element having a unique sequence of nucleotides, which identifies the functional entity.

17. (Currently Amended) A method for transferring a functional entity to a recipient reactive group, comprising the steps of

providing one or more building blocks according to
~~claims 1 to 15~~ claim 1,

contacting the one or more building blocks with a
corresponding encoding element associated with a recipient
reactive group under conditions which allow for a recognition
between the one or more complementing elements and the coding
elements, said contacting being performed prior to,
simultaneously with, or subsequent to a transfer of the
functional entity to the recipient reactive group.

18. (Original) The method according to claim 17, wherein the
coding element comprises one or more coding sequences
comprised of 1 to 50 nucleotides and the one or more
complementing elements comprises a sequence of nucleotides
complementary to one or more of the coding sequences.

19. (Currently Amended) The method of ~~claims 17 or 18~~ claim
17, wherein the recipient reactive group is an amine group,
which may be part of a chemical scaffold, and the linkage
between the functional entity and the scaffold is of the
general chemical structure:

Scaffold-NH-X(=V) -R

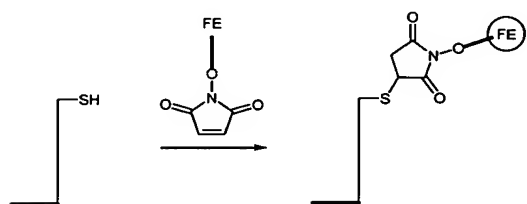
In which

X = -C-, -S-, -P-, -S(O)-, -P(O)-, and

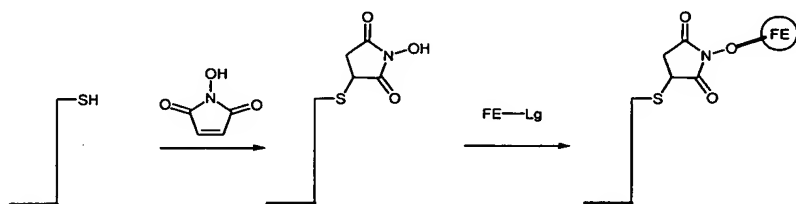
V = O, S, NH, N-C₁-C₆ alkyl.

20. (Original) The method according to claim 19, wherein X is C and V is O.

21. (Original) A process for preparing a building block according to claim 1, comprising the step of

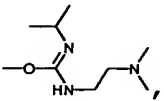
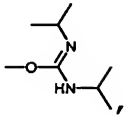
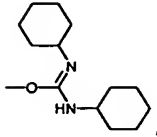


22. (Original) A process for preparing a building block according to claim 1, comprising the steps of



where Lg is a leaving group.

23. (Original) A process according to claim 18, wherein the

leaving group is selected from , , , Cl,
Br.